

## **THE LEVEL OF KNOWLEDGE AND SELF-MANAGEMENT IS RELATED TO THE QUALITY OF LIFE OF HYPERTENSIVE PATIENTS**

**Januarty Nur Fitriani, Dhian Luluh Rohmawati\*, Dika Lukitaningtyas**

D-III Nursing Study Program, Akademi Keperawatan Pemerintah Kabupaten Ngawi, Mulyorejo, Central Karang, Ngawi, East Java 63218, Indonesia

\*[dhian.luluh@gmail.com](mailto:dhian.luluh@gmail.com)

### **ABSTRACT**

The level of knowledge, self-management, and self-efficacy is an individual's ability to control blood pressure, perform self-care, and adhere to treatment which in turn can affect a person's quality of life. The level of knowledge, self-management, and self-efficacy is very necessary for people with hypertension because all three are an important part of determining the quality of life. The study aimed to analyze the relationship between the level of knowledge, self-management, and self-efficacy with the quality of life of hypertension sufferers. This research is a correlation descriptive study using a cross-sectional approach. A purposive sampling technique was used to select 95 respondents as the sample in this study. A knowledge level questionnaire, self-management behavior questionnaire, self-efficacy questionnaire, and WHOQOL-Bref questionnaire were used to collect data. Spearman rank is used for statistical tests. The results showed that the relationship between the level of knowledge and quality of life result was obtained  $\rho$ -value 0.005  $r = -0.288$ , the relationship between self-management and quality of life was obtained result  $\rho$ -value 0.001  $r = 0.330$ , the relationship between self-efficacy and quality of life obtained result  $\rho$ -value 0.095  $r = 0.172$ . There is a relationship between the level of knowledge and self-management and quality of life. There is no relationship between self-efficacy and quality of life in hypertension sufferers.

Keywords: hypertension; level of knowledge; self-efficacy; self-management; quality of life

### **INTRODUCTION**

Hypertension is considered a silent killer because it usually has no symptoms, causing sufferers to be unaware of their condition until complications occur (Supriati, 2020). Hypertension is defined as a persistent increase in systolic and diastolic blood pressure, with systolic blood pressure above 140 mmHg and diastolic blood pressure exceeding 90 mmHg. (Nabila et al., 2022). One of the leading causes of death globally is hypertension. Global efforts to prevent non-communicable diseases have also set a goal to reduce the incidence rate of hypertension by 33% between 2010 and 2030 (WHO, 2021).

The World Health Organization (WHO) reports that hypertension affects 22% of the global population. Africa has the highest prevalence of hypertension, and Southeast Asia comes in third with 25% of the total population (WHO, 2019). South Kalimantan has the highest incidence of hypertension in Indonesia, at 44.1%, while Papua Province has the lowest, at 22.2%. Hypertension prevalence in East Java increased by 9.9% in 2018 compared to Riskesdas data from 2013 (Kementerian Kesehatan RI, 2018). According to Ngawi Regency Health Office data, the number of patients with hypertension who used health center services in 2020 was 40,134 (Dinas Kesehatan Ngawi, 2018). The prevalence of hypertension at the Jogorogo Health Center was 1,614 cases in 2021, and there were 1,485 cases of hypertension from January to October 2022 (Jogorogo, 2021).

Hypertension is a chronic disease that reduces a person's quality of life. Many studies have been conducted to evaluate the quality of life of hypertensive sufferers, and most of the findings show that hypertensive sufferers have a low quality of life (Widyastuti, 2021). Quality of life can be

described as a measurement instrument that health workers can use to evaluate the health of patients with chronic conditions (Widyastuti, 2021). Chronic disease patients usually experience a low or worsening quality of life. Individual characteristics and the environment influence the quality of life.

Hypertension can be prevented if risk factors are controlled in a timely manner, so early detection of hypertension and adherence to treatment is the key to controlling blood pressure. Potential to minimize the prevalence of hypertension in Indonesia through promoting blood pressure awareness among individuals, groups and communities. Individuals who have knowledge about blood pressure can help control hypertension because they know the need for regular visits to health care facilities and compliance with taking hypertension medication (Maswibowo, 2018). Patients with a high level of knowledge will improve their attitudes towards blood pressure management, which will also improve. In a study conducted by Kurniawati (2020), there were findings indicating a relationship between the level of knowledge of patients suffering from hypertension and their quality of life.

Self-management is one of the treatments for disease to avoid complications (Utami & Hudiawati, 2020). Disease management is required by the individual to maintain blood pressure within the normal range. Lestari & Isnaini (2018) found that self-management has a positive influence on blood pressure in people with hypertension. High self-management results in lower blood pressure, while low self-management results in higher blood pressure in people with hypertension. Self-management programs encourage individuals to take responsibility for their personal health through disease observation, increasing understanding of their current health condition, and collaborating with doctors to monitor disease progress (Neesa, 2021). It is important to consistently carry out self-management to improve the quality of life for those suffering from hypertension.

An individual's quality of life can improve if he can accept his condition and comply with the treatment plan (Hutagaol, 2017). Self-efficacy is one factor that has the potential to influence increased adherence to treatment. Self-efficacy has been proven to be a predictor of various health-related behaviors and was developed to increase medication adherence in chronic disease patients Isolpia (2021). Based on research conducted by Asnaniar et al. (2020) there is a significant increase in the quality of life of individuals who have a high level of self-efficacy and are able to carry out daily activities with ease. Based on a simple field study of 5 hypertension sufferers, it was found that 5 respondents had a high level of knowledge, 4 respondents with high self-management, 4 respondents with high self-efficacy, 1 respondent with moderate self-management, and 1 respondent with moderate self-efficacy. Many studies have been conducted to observe the relationship between the level of knowledge, self-management and self-efficacy and the quality of life of hypertension sufferers in a particular area. However, research that combines these three variables has not been carried out before.

## **METHOD**

A correlational research design with a cross-sectional method was used in this research. The sample consisted of 95 hypertensive people who were selected using purposive sampling based on predetermined inclusion and exclusion criteria. This research was carried out in on of Community Health Center in Kabupaten Ngawi. The inclusion criteria for this study are: hypertension sufferers

aged 35-65 years, sufferers are classified as primary or secondary hypertension, and willing to be a respondent. After explaining the purpose of the research to respondents who met the criteria, the researcher asked for approval by signing the informed consent form. Then, respondents were given a knowledge level questionnaire, a hypertension self-management behavior questionnaire, a self-efficacy questionnaire, and the WHOQOL-Bref questionnaire. This research involved univariate and bivariate analysis. Univariate analysis was used to evaluate respondent characteristics such as gender, age, education, occupation, level of knowledge, self-management, self-efficacy, and quality of life for hypertension sufferers. Meanwhile, bivariate analysis using the Spearman Rank test with a  $p$ -value of 0.000 ( $p < 0.05$ ), showed that there was a relationship between the level of knowledge, self-management and self-efficacy and the quality of life of hypertension sufferers.

## RESULTS AND DISCUSSION

Table 1 shows that the majority of responders were female (76.8%), with an age range of 56-65 years (56.8%). The majority of responders had finished elementary school (47.4%) and worked as farmers (67.4%).

Table 1.  
Demographics of respondents (n=95)

Variable	f	%
Gender		
Male	22	23,2
Female	73	76,8
Age		
35-45 Years	10	10,5
46-55 Years	31	32,6
56-65 Years	54	56,8
Education		
Not school	17	17,9
Elementery	45	47,4
Junior High School	22	23,2
Senior High School	9	9,5
College	2	2,1
Occupation		
Doesn't work	6	6,3
PNS	2	2,1
Farmer	64	67,4
Self-employed	13	13,7
Miscellaneous	10	10,5

Table 2.  
The Distribution respondents based on the level of knowledge, self-management, self- efficacy, and quality of life of hypertension patients (n=95)

Variable	f	%
Knowledge level		
Good	45	47,4
Simply	37	38,9
Less	13	13,7
Self Management		
Good	82	86,3
Simply	8	8,4
Less	5	5,3
Self Efficacy		
High	92	96,8
Low	5	3,2
Quality of Life		
High	79	83,2
Medium	13	13,7
Low	3	3,2

The result of this table show that most respondents have a good level of knowledge as much as 45 respondents (47.4%), good self-management as many as 82 respondents (86.3%), self-efficacy high as 92 respondents (96.8%), and high quality of life as many as 79 respondents(83.2%).

Table 3.  
Correlation between the level of knowledge, self management and self efficacy with quality of life (n=95)

Variable	Quality of life				Total	%	p-value	R		
	High	%	Medium	%						
The level of knowledge										
- Good	35	77,8	9	20	1	2,2	45	47,4	0,005	-0,288
- Simply	32	86,5	3	8,1	2	5,4	37	38,9		
- Less	12	92,3	1	7,7	0	0	13	13,7		
Self Management										
- Good	68	82,9	12	14,6	2	2,4	82	86,3	0,001	0,330
- Simply	6	75,0	1	12,5	1	12,5	8	8,4		
- Less	5	100	0	0	0	0	5	5,3		
Self Efficacy										
- High	77	83,7	12	13	3	3,3	92	96,8	0,095	0,172
- Low	2	66,7	1	33,3	0	0	3	3,2		

Table 3 shows that there is a significant relationship between the level of knowledge and the quality of life of hypertension sufferers ( $r = -0.288$ ,  $p = 0.005$ ). there is a significant relationship between self-management and the quality of life of hypertension sufferers ( $r = 0.330$ ,  $p = 0.001$ ), there is no significant relationship between self-efficacy and the quality of life of hypertension sufferers ( $r = 0.172$ ,  $p = 0.095$ ).

Based on this research, it was found that hypertension sufferers have an average age of between 56-65 years and the majority of respondents were women with 73 respondents (76.8%). This finding is in line with research by (A. P. Utami & Hudiyawati, 2020) which also found that the majority of hypertension sufferers were aged between 56-65 years, with a total of 55 respondents. The risk of developing hypertension tends to increase as a person ages. Researchers assume that increased blood pressure occurs as a result of changes in the structure and function of the vascular system that occur with age. These changes include a decrease in vascular adaptability, the presence of atherosclerosis, and a decrease in smooth muscle release. Apart from that, changes in blood volume supply also contribute to reducing cardiac output and increasing peripheral resistance (Rohmawati, 2021). The researchers' assumption is that the female hormone estrogen has various metabolic impacts, one of which is maintaining good blood vessel construction. Because estrogen production decreases after menopause, its role in maintaining blood vessel formation also decreases, this makes women more susceptible to hypertension (Raj et al., 2023).

With a total of 45 respondents (47.4%) elementary school graduates constitute the majority of respondents' education and the majority of respondents work as farmers with a total of 64 respondents (67.4%). The findings of this research are in line with research conducted by (Utami & Hudiyawati, 2020), which found that the majority of hypertension sufferers had an elementary school level of education, with a total of 46 respondents. Researchers believe that a person's level of education has an influence on the incidence of hypertension. The risk of developing hypertension tends to increase with a person's lower level of education due to a lack of knowledge and awareness about health. Hypertension sufferers who have a low level of knowledge are at risk of facing problems in managing their disease. Inability to control hypertension can cause various complications in the future (Hastutik, 2020). Researchers assume that respondents who work as farmers have activities that start from morning to evening, and a heavy workload can cause stress and increase the risk of hypertension. Hypertension itself has one of the risk factors related to work. A heavy workload can affect a person's health. Stress can cause a faster and stronger increase in heart rate, resulting in increased blood pressure. If stress is prolonged, the body will experience changes that have the potential to cause pathological diseases such as hypertension.

Based on research findings, the majority of respondents had a good level of knowledge (47.4%), had good self-management (86.3%) and had a high level of self-efficacy (96.8%). This research supports the findings of Rosa & Natalya (2023) who found that the majority of respondents (54.4%) had a good level of knowledge. Researchers assume that the presence of good information can increase individuals' awareness of their personality, so that they can make better judgments. In this situation, a person will use their knowledge to maintain their own health by following hypertension treatment and visiting health facilities regularly (Hastutik, 2020). This research supports the findings of Utami & Hudiyawati (2020) who found that the majority of respondents, totaling 46 people, had high self-management skills. According to (Syaftriani et al., 2021), self-management refers to self-care actions aimed at controlling an individual's health, growth and well-being. In the context of this research, it is assumed that effective self-management will have a positive impact on blood pressure in people with hypertension, because self-management plays a role in managing and maintaining blood pressure stability. Self-management is influenced by support from the family. By providing adequate support, patients with hypertension will be enthusiastic about undergoing self-management (Nabila et al., 2022). This research supports the findings of

Retnoningtyastuti et al. (2022), who found that the most respondents, 43 people (86%) had high self-efficacy. The researcher's assumption is that high self-efficacy leads to better coping in hypertensive individuals. Self-efficacy allows hypertensive patients to have the urge to act and try to recover (Tiara & Natalya, 2022). Based on research findings, the majority of respondents showed a high level of quality of life (96.8%). This finding is in line with research conducted by Arsela (2021), which also indicated that the majority of respondents had a high quality of life, with 60 respondents (75%). Researchers assume that the high quality of life in hypertensive patients is determined by the individual's perception of the quality of life they experience. Several things can have an impact on a person's quality of life, including physical activity, social support, and compliance with taking hypertension medication (Shishavan et al., 2018; Silva et al., 2020). Patients with a high quality of life have no complaints, physical function and feelings are normal, feel healthy and happy, have a satisfying job, maintain strong interpersonal relationships, work well, and can handle stress in daily life (Widyastuti, 2021).

The results of this study indicate that there is a correlation between the level of knowledge and the quality of life of hypertension sufferers, although this relationship has low strength ( $p$ -value 0.005,  $r = -0.288$ ). This finding is in line with research conducted by Pratiwi (2020), which found a relationship between the level of knowledge and quality of life in elderly people with chronic conditions based on the Chi Square analysis test ( $p$ -value = 0.001). According to Pratiwi (2020) findings, a high level of knowledge contributes 80.9% to quality of life. According to research by Nur & Mukhlis (2020), people who lack knowledge are 4.4 times more likely to have a low quality of life. In this survey, the majority of respondents demonstrated a high level of expertise. A strong level of information can help individuals understand themselves better and make better judgments. This research indicates that there is a low and negative relationship between the level of knowledge and the quality of life of hypertension sufferers. This means that the lower the level of knowledge they have, the higher the quality of life experienced by hypertension sufferers. Researchers assume that respondents have a good quality of life because they are financially capable and are always helped by their families when undergoing therapy. There were also respondents who received support and attention from their families, so that their quality of life improved. This is in line with the findings of Azmi et al. (2018) who concluded that the quality of life of respondents increased due to the support they received from their family and social environment.

The results of this study indicate that there is a low and positive relationship between self-management and the quality of life of hypertension sufferers in the Jogorogo Community Health Center working area ( $p$ -value 0.001,  $r = 0.330$ ). This finding is in line with research conducted by (G. N. M. Utami et al., 2021), which also found a relationship between self-management and the quality of life of hypertensive elderly who work at the Buleleng I Community Health Center using the Spearman Rank test ( $p$ -value = 0.000). This research indicates that the better self-management carried out, the better the quality of life for hypertension sufferers. These findings also support the findings of Benzo et al. (2016), who stated that there is a relationship between self-management and quality of life. This research suggests that the ability to control hypertension symptoms can help maintain fitness, improve social interactions, develop emotional stability, and achieve better health conditions. Obtaining significant results in self-management is an effort that can be applied to keep blood pressure stable. The results of this study found a low and positive relationship between self-management and the quality of life of hypertension sufferers. This means that the

better self-management implemented, the higher the quality of life experienced by hypertension sufferers. Hypertensive patients who practice proper self-management will gain access to self-management programs that enable them to improve their quality of life. This program invites people to check their blood pressure to maintain their health, study their condition, and collaborate with doctors to analyze the development of hypertension (Hallberg et al., 2015).

The results of this study show that there is no correlation between self-efficacy and the quality of life of hypertension sufferers in the Jogorogo Community Health Center working area ( $\rho$ -value 0.095,  $r = 0.172$ ). This finding is in line with research conducted by Isolpia (2021) which also found that there was no relationship between self-efficacy and quality of life in hypertensive patients at the Andalas Health Center, Padang City in 2021. However, this research is different from the findings of Susanti et al. (2020), which shows that there is a relationship between self-efficacy and the quality of life of hypertensive patients in the Silo Jember Health Center working area with a  $\rho$ -value = 0.001 using the Spearman Rank test.

According to the findings of Susanti et al. (2020), there is a correlation between self-efficacy and coping in hypertension sufferers. High self-efficacy will make individuals able to deal with existing situations or stressors well. Hypertensive patients who have a high level of self-efficacy are more motivated to recover from their disease. They are better able to deal with stress, take appropriate action, and maintain health with discipline. Thus, high self-efficacy can help hypertension sufferers overcome the obstacles of their disease and increase their potential to recover and live a better life. In the context of this research, self-efficacy is viewed as an important factor in the self-management of individuals with chronic conditions. Individuals who have a strong sense of self-efficacy can enjoy a better quality of life. So they can live a fulfilling life even though they have hypertension. Patients who believe that they have a high level of self-efficacy in dealing with their condition will find it easier to live their daily lives normally.

The results of this study indicate that all patients with a high level of self-efficacy have a high quality of life, although in this study no significant relationship was found between self-efficacy and quality of life. Researchers assume that the insignificant results in this study could be caused by hypertension sufferers' lack of compliance with treatment and lack of motivation to have regular health checks. Based on the results of filling out the questionnaire, respondents tended to take medication only when they felt complaints, and they were worried that taking too much medication could have a bad impact on their health. In addition, the lack of motivation of respondents to have regular health check-ups can be attributed to the majority of respondents who work as farmers, with busy work schedules from morning to evening. This causes them not to have time to carry out regular health checks at health services.

## **CONCLUSION**

The majority of hypertensive respondents are female, on average 56-65 years old. The most dominant level of elementary school education and the majority of hypertension sufferers work as farmers. Most of them have a good level of knowledge, good self-management, high self-efficacy and a high quality of life. There is a link between hypertension sufferers' knowledge levels and their quality of life. This link has a low strength and a negative trend. Self-management is associated with hypertension patients' quality of life. This association has low strength and a

positive trend. There is no significant relationship between self-efficacy and the quality of life of hypertension sufferers.

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